

A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON NURSING CARE OF PATIENT WITH INTRA-AORTIC BALLOON PUMP AMONG THE B.SC. NURSING STUDENTS OF THE SELECTED NURSING COLLEGE, IN CHENNAI

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ABSTRACT

The present study was taken up to assess the effectiveness of structured teaching programme on nursing care given to the patient using intra-aortic balloon pump, conducted among the students studying BSc nursing. It was a pre-experimental study conducted among forty (40) B.Sc students of second year. The study results showed that pre-test scores majority (90%) of 2nd year B.Sc nursing students had poor knowledge and about 10% had an average level knowledge. Whereas, in the post test, it was seen that highest percentage 50% had good knowledge, 35% had excellent knowledge, 15% had average level knowledge. There was a statistically significant improvement in level of knowledge after structured teaching programme on nursing care provided to the patients by using intra-aortic balloon pump among second years B.Sc nursing students. There was no significant association between post test level of score with the selected demographic variables such as gender, age, previous knowledge and religion.

KEYWORDS: Intra-Aortic Balloon Pump, Structured Teaching Programme & Level of Knowledge

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INTRODUCTION

Patients with cardiac problem such as myocardial infarctions and shock will be benefited with the administration of Intra-Aortic Balloon Pump (IABP). It provides life saving cardiac support to cardiac patients. Intra-Aortic Balloon Pump (IABP) therapy was practiced for the first time in the 1960 to treat the cardiogenic shock. It possesses a major role in the management of health of the cardiac patients (Reid and Cottrell, 2005). In this technique, there occurs balloon inflation at diastolic phase in the cardiac cycle. This inflation results in the displacement of the volume of blood inside the descending thoracic aorta. The blood in the proximal area will help to oxygenate the heart muscle whereas the blood in the distal area supply throughout the body. The deflation of the balloon occurs just before the onset of systole. This results in decrease in the load on the heart. As there is decrease in the load on the heart, there will be improvement in the cardiac output (Lewis, 2016). In India, about 45 million people are affected with coronary artery diseases. In fact, one-fifth of the death in India occurs due to coronary artery diseases. About 50,000 cardiac surgeries take place in India per year being the highest number. The aim of the IABP is to support the failing heart by simultaneous increase in the supply of myocardial oxygen with decreased demand of myocardial oxygen (Kate O'Donovan, 2011).

Lewis, Ward and Courtney conducted a study in 2009 regarding IABP in the management of heart failure, and had concluded further that, in order to achieve the best possible outcome for a patient managed with IABP,

nursing and medical staff required specialized skills. Nurses must continually assess changes in patients' condition which require knowledge of the cardiovascular system, therapeutic effects of IABP, and potential adverse events. Thus, the nursing staff working especially in the cardiac ward must have adequate knowledge about the IABP to achieve better outcomes.

NEED FOR THE STUDY

The students in the field of nursing should have the ability to deliver quality of nursing care, knowledge of physiology, hemodynamic effects, and skilful problem-solving among patient with IABP. Knowledge regarding IABP therapy is vital to safe, efficient patient care in the cardiothoracic intensive care unit. Hence, the present study was undertaken.

Statement of the Problem

A Study to Assess the Effectiveness of Structured Teaching Programme on Care of Patient Intra-Aortic Balloon Pump among Bsc Nursing Students at Selected Nursing College, Chennai.

Objectives

- To assess the level of knowledge on Nursing care of patients with IABP before and after administration of structured Teaching Programme among B.Sc Nursing students
- To provide structured Teaching Programme on Nursing care of patients with IABP among B.Sc Nursing students
- To observe the association between post test scores of levels of knowledge with selected demographic variables

HYPOTHESIS

- H1: There may be a significant difference in level of knowledge on nursing care of patients with IABP among B.Sc Nursing students.
- H2: There may be a significant association between pre-test knowledge score of B.Sc nursing students on nursing care of patient with IABP with selected demographic variables.

METHODOLOGY

Research Approach

The research approach used in this study was Quantitative in nature.

Research Design

The research design used to in this study was a pre experimental one group pretest and post test research design

VARIABLES OF THE STUDY

A variable is defined as an attribute of person or objects that varies that on different values.

Dependent Variable

Dependent variable in the study was knowledge of the 2nd year B.Sc Nursing students regarding the nursing care of patients with intra-aortic balloon pump.

The independent variable in the study was Structured Teaching programme on nursing care of patients with intra-aortic balloon pump.

SETTINGS OF THE STUDY

The setting for the study was Sridevi college of Nursing, Chennai.

Sample

Forty (40) undergraduate nursing students were part of the study after obtaining the informed consent.

Sample Size: The sample size for this study was forty (40) B.Sc Nursing students.

SAMPLING TECHNIQUE

The sampling technique used in this study was simple random sampling technique.

Inclusion Criteria

- Second year nursing students of both genders
- Participants who were available time of data collection
- Willing participants

Exclusion Criteria

- Participants other than second year nursing
- Unwilling participants

DESCRIPTION OF DATA COLLECTION TOOL

Part -A: Structured questionnaire to collect demographic and clinical data

Part B: It consists of three parts

Section-A: The tool consists of items regarding knowledge on anatomy & physiology of heart.

Section -B: The tool consists of items regarding knowledge of IABP.

Section-C: The tool consists of items regarding knowledge on nursing care of patient with Intra-aortic balloon pump

DATA COLLECTION PROCEDURES

Pretest was conducted for B.Sc nursing second year students in the Sridevi college of nursing with structured knowledge questionnaire and structured teaching programme was conducted on the day of data collection. Lecture cum Discussion was used as a methods of teaching and AV aids was used for teaching for video and LCD slides. STP was conducted for forty five (45) minutes. Post test was conducted on tenth day of teaching programme with the same structured knowledge questionnaire.

RESULTS AND DISCUSSIONS

The collected data were tabulated and analyzed using descriptive and inferential statistics and results were interpreted. Frequency and percentage distribution of demographic variable of B.Sc nursing students revealed that the majority of the students were 19 years (45%), females (70%), regarding religion majority (60%) and with regard to previous knowledge, 65% of them did not have any idea about nursing care of IABP. Regarding pre-test scores of Knowledge on nursing care of patient with IABP, majority (90%) of 2nd year B.Sc nursing students had poor knowledge and 10% of had average level of knowledge. None had good and excellent level of knowledge. Whereas, in the post test it was seen that highest percentage (50%) had good knowledge, 35% had excellent knowledge, 15% had average level of knowledge and no one have inadequate knowledge. It shows that, there was statistically significant improvement in level of knowledge among second years. B.Sc nursing students after administration of structured teaching programme on nursing care of patients with IABP. There was no significant association between post test level of score with the selected demographic variables such as age, gender, religion and previous knowledge.

Table 1: Frequency and Percentage Distribution of Demographic Variables of Nursing Students

N= 40

S. No	Variables	Frequency	Percentage
1.	Age in years		
	a. 18	12	30%
	b. 19	18	45%
	c. 20	10	25%
2.	Sex		
	a. Male	12	30%
	b. Female	28	70%
3.	Religion		
	a. Hindu	24	60%
	b. Muslim	2	5%
	c. Christian	14	35%
	d. others	0	0%
4	Previous knowledge		
	a. yes	14	35%
	b. no	26	65%

Table 1 shows percentage distribution of subjects according to their age in years. From this table, it is evident that majority (45%) of samples was in the age group of 19 years and 30% of samples were in the age group of 18years. The rest of subjects (25%) were in the age group of 20 years. Majority of (70%) of samples were female, 60% of samples were belongs to Hindu religion and with regard to previous knowledge, majority (65%) of don't have any idea about nursing care of IABP and rest of the 35% had some information about nursing care of IABP. The study shows that most of the students do not have information about care of IABP.

Table 2: Pretest and Post test Level of Knowledge score of Nursing Students regarding Nursing Care of Patient with IABP

N=40

S. No	Level of Knowledge	Pretest		Post Test	
		Frequency	Percentage	Frequency	Percentage
1	Inadequate 0- <12	36	90%	0	0%
2	Average 12- <24	4	10%	6	15%
3	Good 24- <30	0	0%	20	50%
4	Excellent 30- 36	0	0%	14	35%
Total		40	100	40	100

Table: 2 reveals that in pretest knowledge level, majority (90%) of 2nd year B.Sc nursing students had poor knowledge regarding nursing care of patient with IABP and 10% had average level of knowledge. None had good and excellent level of knowledge. Whereas, in the post test it was seen that highest percentage 50% had good knowledge, 35% had excellent knowledge, 15% had average level of knowledge and no one had inadequate knowledge.

CONCLUSIONS

There was a significant improvement in the knowledge of undergraduate nursing students followed by the structured teaching programme. It is important to have regular educational programs for student nurses to improve their knowledge and practical skills while caring the patient, to achieve quality of care as well as prevent complications associated with IABP.

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REFERENCES

1. American Heart Association, (2016). *Care of patient with IABP, Provider Manual*. United States Of America: Integracolor, Ltd
2. Anand, S. Vijay, and G. Dhanalakshmi. "Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Therapeutic Communication among Staff Nurses Working in Psychiatric Hospitals Chennai." *International Journal of Medicine and Pharmaceutical Sciences (IJMPS)* 7.2 (2017): 13-18.
3. Brunner &Suddarth, (2003). *Text Book of Medical and Surgical Nursing*. (12th ed.). Philadelphia, J. B. Lippincott Company; p. 892-902
4. Catton J. (2005), *Intra-aortic balloon pump counter pulsation therapy*. *Br J Cardiac Nursing*; 1(12): 582-588
5. Darovic GO. (2002), *Haemodynamic Monitoring: Invasive and Noninvasive Clinical Application*. Philadelphia, PA: WB Saunders,
6. Harrison's (2018), *Principles of Internal Medicine*. (20th ed.). Kindle edition; p.291-294.
7. *Intra-Aortic Balloon Pump Free Encyclopedia*. Available from: <https://www.texasheart.org/heart-health/heart-information-center/topics/ventricular-assist-devices/>
8. Kate O'Donovan, *Intra-aortic balloon pump therapy: continuing education*, March 2011 Vol 19 Issue-2: 37-39.
9. Kavitha, L., and O. T. V. Latasri. "A Study on Measuring Faculty Engagement of College Teachers in Tiruchirappalli District."
10. Lewis's, (2018). *Text Book of Medical and Surgical Nursing*. (2nd ed.). South Asia, Elsevier; p. 677-689.
11. Naganandini, R. "Effectiveness of Structured Teaching Programme on Knowledge Regarding Selected Adolescent Behavioral Problems and its Prevention among Students." *Nursing (TJPRC: IJPN)* 2.1 (2016): 1-8.
12. Polit & Hungler, (1999). *Nursing Research Principles and Methods*. (4th ed). Philadelphia: Lippincott company publishers.
13. Reid MB, Cottrell D. *Nursing Care of Patients receiving intra-aortic balloon counter pulsation*. *Critical Care Nurse* 2005;

25(5): 40-49

14. Rasaria S, Sawant S. (2019), *The Role of Nurses in Patients with Intra-aortic Balloon Pump: Involvement, Understanding, and Management of the Patient's Comfort*. *Innov J Nurs Healthc.*;5(2):16-19

AUTHOR'S PROFILE



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